Sally L. Holl

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EXPERIENCE

U.S. GEOLOGICAL SURVEY

Geographer, Texas Water Science Center, 2010 – present

- Managed a GIS-based water information software development project, *NWIS Snapshot for ArcGIS* (http://txpub.usgs.gov/snapshot). Managed $150K in funding, 8 project staff, and 40 software testers over two development cycles.
- Ground-up creation of a geodatabase, web service, and two USGS Fact Sheets for the *National Climate Change and Wildlife Science Center (NCCWSC)*.
- Technical lead and trainer for *DOI Climate Science Center* websites (http://doi.gov/csc/).
- Moderated a panel of nationally-recognized scientists to gather user requirements to guide the *USGS Community for Data Integration(CDI)* investment strategy.
- Initiated web-based, crowd-sourced reference management for the USGS CDI-Data Management committee and the NCCWSC
- Assisted in collecting and analyzing brine samples from hydrocarbon wells in the *East Texas Oilfield*. Compiled results and site information into a geodatabase to expedite quality assurance and analysis.
- Automated retrieval of well log images and metadata from the Texas Railroad Commission website to a spatially-enabled database using Python scripting for the *Edwards-Trinity Aquifer Study* resulting in significant project cost savings.
- Streamlined production of maps using Data Driven Pages and ArcPy Mapping for the *Sparrow model project* to quantify nitrogen and phosphorus sources and outputs to streams and bays.

Geographer, Texas Water Science Center, 2007 – 2009

- Led field geospatial data collection and desktop data integration to identify impacts of contaminants on fish health for *United States-Mexico Border Environmental Health Initiative (BEHI)*. Managed BEHI hydrology account funding of $60K for six project staff.
- Managed a $20K *Data Rescue and Recovery* project: http://txpub.usgs.gov/LTM.
- Streamlined production of flood inundation maps and calculation of precipitation statistics using Google Earth, Python scripting and ArcMap for biological in-stream flow requirements research.
- Created rainfall-runoff model input in ArcMap and HEC-HMS for a *Texas Department of Transportation* project. Identified and acquired software at no cost to the project which enabled on-time project completion.
- Created a semi-automated hydrologic unit naming process to rapidly assign names to thousands of watersheds for the *USDA NRCS Watershed Boundary Dataset* project.

Climate History Team Intern, Reston, 1997

- Created digital maps of U.S. aeolian deposits and an NDVI map of riparian vegetation along an impaired river for the U.S. Global Change Research program.

Energy Resource Surveys Team Intern, Denver, 1996

- Digitized oil and gas plays for a world energy resources assessment.

COOPERATIVE RESEARCH CENTRE FOR GREENHOUSE GAS TECHNOLOGIES (CO2CRC), AUSTRALIAN SCHOOL OF PETROLEUM, ADELAIDE UNIVERSITY

Researcher, 2009 – 2010

- Collaborated with public and private sectors – including *Xstrata Coal*, *CSIRO*, *CO2CRC*, and *Geoscience Australia* – to author a $184M proposal for *Wandoan Power Integrated Gasification Combined Cycle (IGCC) Carbon Capture and Storage (CCS) Project* supported by Australia's *CCS Flagship Program*.
- Managed authorship of a successful $200K proposal for a review study of geological seals for *International Energy Association Greenhouse Gas Programme (IEAGHG)*.
- Assisted in instruction of 20 petroleum engineering graduate students from 7 different countries in a presentation skills class.
- Designed 2-D and 3-D geologic basin models, presentations, animations, and diagrams.

FLINDERS UNIVERSITY, CHEMISTRY, PHYSICS & EARTH SCIENCES, AUSTRALIA

Adjunct Lecturer, Earth Sciences Field Camp, 2009

- Taught 25 students how to characterise fate and transport of high salinity groundwater in order to understand anthropogenic impacts on ecosystem health and develop more effective ecosystem management strategies.

ROWLAND HIGH SCHOOL, ROWLAND HEIGHTS, CALIFORNIA

Earth Science Teacher, 2005 – 2007

- Created and implemented earth science and technology instruction for 175 students per day. Students were from diverse ethnic and socio-economic backgrounds.
- Built rapport and networked with the professional science community to host guest speakers and promote teacher training.
- Authored proposals providing $5K in funding for student field trips and materials.

UNIVERSITY OF CALIFORNIA, IRVINE. EARTH SYSTEM SCIENCE DEPARTMENT

Programmer/Analyst, 2001 – 2004

- Produced climate model forcing data sets for the *NASA Seasonal to Inter-annual Prediction Project (NSIPP)*.
- Collected ground truth data for validation of satellite-based C-band microwave radiometer measurements: *NASA-USDA joint Soil Moisture Experiment*.
- Developed Unix-based analytical programs with Fortran 77/90.
- Analyzed hydrology and climate time series and dynamical land surface model output.

UNIVERSITY OF TEXAS AT AUSTIN. DEPARTMENT OF GEOLOGICAL SCIENCES

Teaching and Research Assistant, 2000 – 2001

- Managed classroom and field instruction for 50 students of introductory geology.
- Produced self-directed research and computer programming for NSIPP.
- Wrote three successful grant proposals.

OBERLIN COLLEGE. CENTER FOR INFORMATION TECHNOLOGY

IT Supervisor and Consultant, 1995 – 1998

- Supported and trained 3,000 faculty, staff, and students in computer software and hardware.
- Oversaw hiring, scheduling and training of 23 consultants working at three labs.

OBERLIN CHAMBER OF COMMERCE

Assistant to the Executive Director, 1994 – 1998

- Provided comprehensive public relations, communications, and technical support to the Director for economic development, city event planning, and visitor information.

ARAMCO SERVICES COMPANY

Public Affairs Intern, 1994.

- Managed *Aramco World* publications archives for one of the world's largest oil and gas producers.

EDUCATION

UNIVERSITY OF TEXAS AT AUSTIN
M. S. Geological Sciences, 2004. Majors: Hydrology, Hydrogeology
UNIVERSITY OF CALIFORNIA, IRVINE
Earth System Science graduate coursework, 2001 – 2002.
OBERLIN COLLEGE, Oberlin, Ohio
B. A. Geology and Musicology, 1994 – 1998
CASE WESTERN RESERVE UNIVERSITY, Cleveland, Ohio
M.B.A. coursework, 1999 – 2000. Subjects: Finance, Accounting, Economics
CALIFORNIA STATE UNIVERSITY, FULLERTON
Secondary Teaching Credential, 2007. Subjects: Earth Science, Music

CONTINUING EDUCATION

Apple iPhone Programming, 2011.
A 42-hour course to learn how to develop basic iPhone programs.

Flash 1: Introduction, 2011.
An 18-hour course to learn how to create and publish Flash files in a variety of formats for online and offline delivery.

TDWI Data Asset Management Training, 2011.
A 4-day course in Minneapolis, MN, that covered Data Governance Fundamentals, Data Quality Fundamentals, Requirements Gathering, and Master Data Management Fundamentals.

USGS Data Management Training, Reston, VA, 2011.
An 8-hour course in Reston, VA, taught by Tom Chatfield of Bureau of Land Management for area science data coordinators. Had a key role in initiating this course.

EPA Open-Hole Logging Basic Course, 2011.
A 2-day course covering borehole log interpretation to determine porosity, gas effect, lithology and water saturation.

Australian National Data Service (ANDS) Data Management Boot Camp, 2010.
A 3-day course regarding data management best practices held at Monash University in Melbourne, Victoria, Australia.

International Energy Association Greenhouse Gas Programme (IEAGHG) International Interdisciplinary Summer School, 2009.
A 5-day school held in Lorne, Victoria, Australia that covered all aspects of carbon dioxide capture and storage. Admission was by highly competitive application.

AWARDS

Superior Performance Rating, U.S. Geological Survey, 2011
STAR Awards, U.S. Geological Survey, 2008 (1) and 2011 (2)
Best Group Presentation Award, IEAGHG International Summer School, 2009.
FEDCO Classroom Enrichment Grant, Cal Poly Pomona, 2007
Student-Impact Grant, Credit Union of Southern California, 2005
UT Austin Environmental Science Institute Graduate Research Fellowship, 2001
Outstanding Teaching Assistant, University of Texas at Austin, 2001

PRESENTATIONS & PUBLICATIONS

First author:

Holl, Sally (2011), National Climate Change and Wildlife Science Center Project Accomplishments: Highlights. U.S. Geological Survey Fact Sheet 2011-3135, 4 p., http://pubs.usgs.gov/fs/2011/3135/

----- (2011), U.S. Geological Survey Community for Data Integration: NWIS Web Services Snapshot Tool for ArcGIS, U.S. Geological Survey Fact Sheet 2011-3141, 2 p., http://pubs.usgs.gov/fs/2011/3141

----- (2011), Delivering Climate Science for the Nation's Fish, Wildlife, and Ecosystems: The U.S. Geological Survey National Climate Change and Wildlife Science Center. U.S. Geological Survey Fact Sheet 2011-3057, 2 p., http://pubs.usgs.gov/fs/2011/3057/

----- (2009), Data Rescue and Recovery: A prototype project to unlock more than 100 years of USGS data. USGS Technical Session. Austin, Texas. Presentation and live web broadcast from the Texas Water Science Center, January 2009.

----- (2008), Data-Driven Detectives: Spatial Data Analysis Using Weights of Evidence and Weighted Logistic Regression. Texas GIS Forum. Austin, Texas. October 2008.

----- and D. Eames (2008), Data Rescue and Recovery: A prototype project to unlock more than 100 years of USGS data, http://txpub.usgs.gov/LTM.

----- (2008), A semi-automated hydrologic unit naming method. USGS 7th Biennial Geographic Information Science Workshop. Denver, Colorado. May 2008.

----- (2006), Rowland High School Earth Science Notebook, http://sallyholl.com/science/rhs/.

----- (2005), Pio Pico Middle School Science Class Website, http://sallyholl.com/science/piopico/index.shtml.

----- (2004), The sensitivity of land surface model simulations to bias reduction of ERA-15 downward radiation forcing, M.S. Thesis, University of Texas at Austin.

Co-author:

Berg A.A., J.S. Famiglietti, M. Rodell, U. Jambor, **S. Holl**, R.H. Reichle, and P.R. Houser (2005), Development of a Hydrometeorological Forcing Data Set for Global Soil Moisture Estimation, International Journal of Climatology, 25, 1697-1714.

Bunch, M., D. Haberlah, N. Dobrzinski, **S. Holl**, B. Ainsworth, S. Vidal-Gilbert, B. Field, B. Doody, and S. Mockler (2009), Defining geological systems for CO2 storage - characterisation and modelling. Poster presented at the SPE Technical Forum: CO2 Capture and Storage: Can the Oil and Gas Industry Support its Development and Deployment?, Cadiz, Spain, 13-18 September.

Dobrzinski, N., D. Haberlah, M. Bunch, **S. Holl**, B. Ainsworth, and S. Mockler (2009), CCS modelling workflow: new aspects, emphases and knowledge gaps. In: Program and Abstracts, CO2CRC Research Symposium, Coolum, Australia, 1-3 December, pp. 88.

Famiglietti, J.S., J. Chen, **S. Holl**, M. Rodell, K. Seo, T. Syed, and C.R. Wilson (2004), Terrestrial water storage variations using GRACE: Implications for water budget closure at multiple scales, in Proceedings of the 2nd international CAHMDA workshop on: The Terrestrial Water Cycle: Modelling and Data Assimilation Across Catchment Scales, edited by A.J. Teuling, H. Leijnse, P.A. Troch, J. Sheffield and E.F. Wood, pp. 14, Princeton, NJ, 25-27 October.

Menacherry, S., J. Kaldi, S. Mockler, and **S. Holl** (2010), Assessing a regional to site-specific potential for geologic sequestration in the Sydney Basin, Australia. Abstract submitted for presentation at the AAPG 2010 Annual Convention and Exhibition, New Orleans, USA, 11-14 April.

Rodell, M., J.S. Famiglietti, J. Chen, S.I. Seneviratne, P. Viterbo, **S. Holl**, and C. R. Wilson (2004), Basin scale estimates of evapotranspiration using GRACE and other observations, Geophysical Research Letters, 31, L20504, doi:10.1029/2004GL020873.

Contributor:

Moring, J.B. (2008), Evaluation of Environmental Flow Prescriptions for Big Cypress Creek: An Emphasis on Hydrologic Connectivity. Presented at the Caddo Lake Institute Flows Workshop, December 2008, http://www.caddolakeinstitute.us/docs/flows/dec08meeting/moring_evaluations_hydro_dec08.pdf, pp. 7-10, 14.

-----, Analysis of the Building Blocks. Presented at the Caddo Lake Institute Flows Workshop, December 2008, http://www.caddolakeinstitute.us/docs/flows/dec08meeting/moring_analysis_bldgblocks.pdf, pp. 8-23.

-----, Field Work Since 2006. Presented at the Caddo Lake Institute Flows Workshop, December 2008, http://www.caddolakeinstitute.us/docs/flows/dec08meeting/moring_fieldworksince06_dec08.pdf, pp. 4, 6-7.

Parcher, J. (2009) U.S.-Mexico Border Environmental Health Initiative & U.S.-Mexico Border Geographic Information System. Presented at the United Nations Regional Cartography Conference, August 2009, http://unstats.un.org/unsd/geoinfo/9th-UNRCC-A/Presentations/IP%2018%20behi_UNRRC.pdf, pp. 12-14.

Thompson, D.B. and T.G. Cleveland (2009), Subdivision of Texas Watersheds for Hydrologic Modelling, Texas Tech University Multidisciplinary Research in Transportation Research Report 0-5822-01-2, http://www.depts.ttu.edu/techmrtweb/Reports/Complete%20Reports/0-5822.pdf.

SKILLS

Exceptional skill in networking and presenting.

Ability to produce high quality deliverables to tight deadlines.

Data collection, analysis, and reporting.

Programming Languages: Objective C, Python, and FORTRAN 77 / 90

Applications: ArcGIS Desktop 10.0, ArcGIS Server 9.3, ERDAS Imagine, Microsoft Access, Adobe Creative Suite 5.5, Adobe Captivate, Adobe Robohelp, Flash 5.5, XCode 4.3, Google Earth, ArcParticle, Aquachem, Netpath, Modflow, HEC-GeoHMS, HEC-HMS, Dreamweaver, Zotero, Mendeley, Endnote, IPDS (USGS publications system), and Basis+ (USGS budget management and reporting).

LANGUAGES

Intermediate writing, speaking, and reading skills in Spanish.

SERVICE

Chairperson, Austin Adelaide Sister City Committee, 4/ 2011 – present
Co-Chair, USGS Community for Data Integration Data Policy Committee, 2011
Board member, Bob Koll Sailing Foundation, Newport Beach, CA, 2005 – 2007

FOREIGN TRAVEL

Australia, Egypt, Japan, Cuba, Indonesia, Mexico, Canada, Dominican Republic, Costa Rica, and the Cook Islands